

## AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A printed circuit board, comprising:

a first power plane layer including a first segment for inputting current, a second segment for outputting current and a third segment for connecting said first and second segments, wherein ~~electronic components are~~ a first electronic component is physically coupled [[only]] to said first segment, and second segments a second electronic component is physically coupled to said second segment and said third segment is not coupled to an electronic component; and

a first pair of conductive vias each coupled to different points on said third segment of said first power plane layer, wherein a current transferred from said first segment to said second segment is determined by a potential difference and a resistance between said first pair of conductive vias.

2. (Original) The printed circuit board according to claim 1, wherein said first segment includes a plurality of conductive vias designed to obtain linear current flow between said first segment and said second segment.

Claims 3-9. (Canceled)

10. (Previously Presented) The printed circuit board according to claim 1, wherein said first segment comprises a rectangular geometry.

11. (Canceled)

12. (Original) The printed circuit board according to claim 1, wherein said first segment is electrically characterized for linear current flow.

13. (Original) The printed circuit board according to claim 1, wherein said third segment is capable of carrying current greater than about 20 amperes.

14. (Original) The printed circuit board according to claim 13, wherein said third segment is capable of carrying current from about 20 to about 40 amperes.

15. (Original) The printed circuit board according to claim 1, wherein said third segment is capable of carrying current less than about 20 amperes.

16. (Original) The printed circuit board according to claim 1, wherein a lookup table is utilized for current derivation correlated with the difference in potential measured at said first pair of conductive vias.

Claims 17-20. (Canceled)

21. (Previously Presented) The printed circuit board according to claim 1, wherein each of said first pair of conductive vias comprises an end portion which terminates on said third segment and another end portion which terminates on a pad.